

CLAIMS:

1. A method of determining the signal strength in a receiver or transmitter with complex signal processing using the in-phase channel (I channel) and the quadrature channel (Q channel), characterized in that the field strength signals of the I channel and of the Q channel are fed to an evaluation unit and, in the evaluation unit, an overall field strength
5 signal is generated on a logarithmic scale without intermediate frequency residues from the individual field strength signals.

2. A method as claimed in claim 1, characterized in that the overall field strength signal is generated in the evaluation unit in accordance with the relation

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$$\text{FieldSt} = \ln (e^2 I_{\log} + e^2 Q_{\log}),$$

where FieldSt is the overall field strength signal and I_{\log} and Q_{\log} are the field strength signals of the I channel and of the Q channel, respectively.

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3. A method as claimed in claim 1 or 2, characterized in that the field strength signals of the I channel and of the Q channel are fed to the evaluation unit without amplification.

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4. A method as claimed in claim 1 or 2, characterized in that the field strength signals of the I channel and of the Q channel are amplified before they are fed to the evaluation unit.

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5. A circuit arrangement for determining the signal strength in a receiver or transmitter with complex signal processing using the in-phase channel (I channel) and the quadrature channel (Q channel), characterized in that an evaluation unit (20) is provided, which has two inputs (22, 24) for the field strength signals (I_{\log} , Q_{\log}) of the I channel and of the Q channel and which generates an overall field strength signal (FieldSt) on a logarithmic scale without intermediate frequency residues from the individual field strength signals (I_{\log} , Q_{\log}), in order to output it at an output (26) of the evaluation unit (20).

6. A circuit arrangement as claimed in claim 5, characterized in that the evaluation unit (20) generates the overall field strength signal (FieldSt) in accordance with the relation

$$\text{FieldSt} = \ln (e^2 I_{\log} + e^2 Q_{\log}).$$

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7. A circuit arrangement as claimed in claim 5 or 6, characterized in that the evaluation unit (20) contains in each case one diode (28, 30) for the I channel and the Q channel, where the anodes of the diodes are in each case connected to the inputs (22, 24) for the field strength signals of the I channel and of the Q channel and the cathodes of the diodes (28, 30) are connected to one another, to a current source (32) and to the output (26) of the evaluation unit (20).

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